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PREVENTING FOOD POISONING

A radio talk by Dr. A. C. Hunter, Food, Drug and Insecticide Administration, delivered through Station WRC and 32 other stations associated with the National Broadcasting Company, February 4, 1930.

I take it that all of you who are listening to me today have, at one time or another in your lives, suffered some illness, some ache, or temporary indisposition which you have blamed on "something you ate."

If you have not personally suffered such illness, doubtless your friends and neighbors have.

Such cases may be due to the presence in the food of certain harmful bacteria. They may be due -- as in the recent case of accidental poisoning by Christmas fruit cake which contained arsenic -- not to the food, but to some harmful substance present in it.

Representatives of the Food, Drug, and Insecticide Administration of the United States Department of Agriculture are always on the lookout for foods which may be dangerous to health. Federal action; frequent inspections of food-producing establishments -- numerous laboratory examinations of food samples collected from shipments and stores -- and repeated investigations to uncover new facts about food poisoning, are narrowing the chances of you, the buyer, getting potentially dangerous foods. When food officials find such foods on the market or in the channels of trade, they immediately remove them.

But your food and drug officials can't prevent stomach aches -- and worse -- caused by food contaminated after it gets out of the channels of trade and into your hands. I want to talk over with you today your own methods of handling food which can prevent food poisoning.

Now let us consider two types of poisoning which may be caused by certain bacteria which sometimes contaminate our food. They are "ptomaine poisoning", so-called, and botulism.

The commonest type of food poisoning is characterized by vomiting, diarrhoea, fever, abdominal pains, general weakness and prostration. Until recent years, it was thought that such illness was due to the presence in the food of compounds called "ptomaines" which were produced by spoilage of the food. But we know now that this type of sickness is caused by swallowing large numbers of definitely harmful bacteria which have grown in the food -- or, by eating, with the food, poisons produced by these bacteria. These organisms get into foods in various ways. Some people who have suffered, and recovered, from the illness mentioned, often carry in their bodies living bacteria of this type. Rats, mice, and perhaps certain animal pets may also carry such bacteria. Flies and other insects may spread these bacteria from place to place. With such carriers in existence, sources of contamination for our food supply always exist if care is not taken to safeguard that food. People preparing food may accidentally contaminate the products they are handling. Exposed foods may be contaminated by prowling animals.

Now if agents of this Administration, when they are inspecting food-handling plants, find unsanitary conditions which may lead to contamination of the food supply, they take appropriate action to correct such conditions. But in spite of these efforts and this action, food contamination may occur in the home where the cook and the consumer must be responsible for what is served and eaten. So let's say a word concerning precautions to take in the home.

Food-poisoning bacteria, for their development need moist, warm surrounding. They also need something which they can use as food for themselves. Various prepared foods make good media for their growth and some foods we eat raw -- such as vegetables, shellfish, and milk -- may also carry the organisms if these foods have become contaminated through improper handling or exposure to unclean conditions. It is unfortunate that the bacteria responsible for food poisoning may develop and produce poisons in food without appreciably altering the food's odor or taste.

Bacteria of the food-poisoning group cannot stand much heat and a thorough boiling will destroy them. If contamination occurs after cooking you can reduce the growth of the bacteria to a minimum by proper refrigeration. Reheating before serving will destroy any organisms that have developed. Milk, properly pasteurized, will be free from such bacteria. When food is preserved in tin cans and glass jars, the food-poisoning bacteria and their poisons are ordinarily destroyed. Canned foods, unless spoiled and obviously unfit for use, should be free from bacteria of this type. But if canned goods are held more than a few hours after opening be sure to take the same precautions as to refrigeration and recooking as in the case of freshly prepared foods. Thoroughly heat custards, hashes, and similar foods in their preparation and store them in a cool place.

In the Food, Drug, and Insecticide Administration we have learned that the prevention of food poisoning is not a highly scientific or technical matter. It simply depends upon a few fundamental rules of hygiene which every person who prepares food should constantly bear in mind. We usually find avoidable contaminations and improper refregeration behind each case of illness. Therefore, see that food to be eaten raw is fresh, clean, and free from abnormal odors and rotting areas, and from mold. Always wash it in clean water. Heat cooked food to the boiling point and keep it free from contamination. Keep it in the refrigerator if you want to hold it more than a few hours.

Up to this point, I have talked about one type of food poisoning. There is another type, however, which fortunately is rare since the cases usually end in death. This second kind of illness is known as botulism. It is really a poisoning due to the ingestion of a very powerful poison produced by a specific micro-organism. This organism grows only when no air is present. Unfortunately, conditions in harmetically sealed containers, such as tin cans and glass jars, are favorable for its development. The bacteria causing botulism are distributed in the soil and gain access to foods through contamination with soil. Correct processes for canning foods commercially are scientifically controlled so as to reach a high temperature under steam pressure long enough to kill these bacteria and destroy their poisons.

One thing in favor of the consumer is that the poison produced by these botulism bacteria cannot stand heat and is destroyed by boiling. Freshly and thoroughly cooked foods do not cause botulism. Another factor in the consumer's favor is that the production of this poison is usually accompanied by spoilage of the food. Such spoilage is evident in bad odors, gas formation, cloudiness of the liquid, or other signs. Swelling of the top of the can is a danger sign. Never use food from cans showing springing, flipping or swelled lids. The Food, Drug and Insecticide Administration will cooperate with you by working to rid the markets of such abnormal containers. Throw away, without tasting, any food from glass jars showing leaks around the rubber rings, cloudiness of the liquid, or spurting of the contents when the bottle is opened. Let me urge you never to taste preserved foods about which there is any doubt unless you thoroughly boil those foods from twenty to thirty minutes. If you are doubtful about any food, throw it away.

To avoid poisoning from botulism, follow five fundamental rules: (1) use only clean, sound raw materials when canning or preserving; (2) follow the most recent instructions regarding processing in an attempt to sterilize the product; (3) discard all defective cans and glass containers; (4) carefully examine all foods for signs of spoilage; reject that which is unfit, and (5) before tasting, boil thoroughly all doubtful foods.

Officials of the Food, Drug and Insecticide Administration, so far as it is humanly possible to do so, make it their business to see that all food ingredients shipped in interstate commerce are entirely fit for consumption. Shipment of decomposed food, or of food containing harmful ingredients is prohibited by the Federal Food and Drugs Act and the officials are constantly vigilant to enforce such provisions of the act. Many foods actually and potentially harmful have been removed from the market. In the prevention of food poisoning, however, a great responsibility rests upon the consumer himself. A greater responsibility rests upon the individual preparing food in the kitchen. If each person preparing food for the table would follow the fundamental rules I have outlined and remember that sound food freshly and thoroughly cooked does not cause food poisoning, we might expect that outbreaks of such illness would become extremely rare.